

IN THE CLAIMS

1. (Currently amended) A cap and vessel comprising:

a threaded cap having a permanent, non-frangible non-circular cap flange surrounding an entire circumference of the cap; and

a threaded vessel having a non-circular vessel flange of substantially the same shape as the cap flange, the vessel flange connected directly to the vessel and extending radially from the vessel, wherein the threaded cap is secured to the threaded vessel when the cap flange and vessel flange are aligned.
2. (Previously presented) The cap and vessel of claim 1 wherein the threaded vessel and thread cap have multiple disjointed threads.
3. (Previously presented) The cap and vessel of claim 2 wherein the threaded vessel and threaded cap each have four disjointed threads extending about 180 degrees around the circumference of the threaded vessel, further wherein each thread starts in a location about 90 degrees away from an adjacent thread.
4. (Previously presented) The cap and vessel of claim 1 wherein the cap flange and vessel flange each have four sides of about the same length.
5. (Previously presented) The cap and vessel of claim 4 wherein the cap flange and the vessel flange are substantially square.
6. (Previously presented) The cap and vessel of claim 4 wherein the threaded vessel and threaded cap each have four disjointed threads extending about 180 degrees around the

circumference of the threaded vessel, further wherein each thread starts in a location at the midpoint of one of the vessel flange sides, and about 90 degrees away from an adjacent thread.

7. (Previously presented) The cap and vessel of claim 4 wherein the threaded cap is secured to the threaded vessel a first time after being rotated in one direction approximately 180 degrees.

8. (Previously presented) The cap and vessel of claim 4 wherein the threaded cap is secured to the threaded vessel after being rotated in one direction about 360 degrees or less.

9. (Previously presented) The cap and vessel of claim 7 wherein the threaded cap is removed from the threaded vessel after being rotated in an opposing direction 180 degrees, further wherein the threaded cap is resecured to the threaded vessel in substantially the identical position as the first time.

10-11 Canceled

12. (Previously presented) The cap and vessel of claim 1 wherein the threaded cap and threaded vessel are injection molded polypropylene.

13-17 Canceled

18. (Currently amended) A method for sealing a vessel, comprising the steps of:

placing a threaded cap having a permanent, non-frangible non-circular cap flange that surrounds an entire circumference of the cap on a threaded vessel having a corresponding non-circular vessel flange that is connected directly to the vessel and extends radially from the vessel; and

securing the threaded cap to the threaded vessel a first time by rotating the threaded cap in one direction, the threaded cap secured to the threaded vessel when the cap flange and vessel flange are aligned.

19. (Original) The method of claim 18 further comprising the steps of:

removing the threaded cap from the threaded vessel by rotating the threaded cap in an opposing direction; and

resecuring the threaded cap to the threaded vessel in substantially the identical position as the first time.

20. (Original) The method of claim 19 wherein the threaded vessel and threaded cap each have multiple disjointed threads.

21. (Original) The method of claim 20 wherein the threaded cap is secured to the threaded vessel the first time after being rotated in one direction less than about 360 degrees.

22. (Original) The method of claim 20 wherein the steps of placing, securing, removing and resecuring are automated, further wherein the cap is secured or resecured to the vessel by rotating the cap approximately 180 degrees in one direction, the cap removed from the vessel by rotating the cap approximately 180 degrees in the opposite direction.

23-39 Canceled

40. (Original) The cap and vessel of claim 1, wherein the cap flange and the vessel flange are multiple edged.

41. (Original) The cap and vessel of claim 1, wherein the shape of the cap flange and the vessel flange are chosen from a group consisting of substantially square, substantially triangular, substantially rectangular, and substantially octagonal.

42. (Original) The method of claim 18, wherein the cap flange and the vessel flange are multiple edged.

43. (Original) The method of claim 18, wherein the shape of the cap flange and the vessel flange are chosen from a group consisting of substantially square, substantially triangular, substantially rectangular, and substantially octagonal.

44. (Currently amended) A cap and vessel, comprising:

a threaded cap having a permanent, non-frangible cap flange surrounding an entire circumference of the cap; and

a threaded vessel having a vessel flange of substantially the same shape as the cap flange, wherein the threaded cap is secured to the threaded vessel after being rotated in one direction approximately 180 degrees or less.

45. (Original) The cap and vessel of claim 44, wherein the threaded cap is secured to the threaded vessel after being rotated in one direction approximately 90 degrees.

46. (Previously presented) A method for sealing a vessel, comprising the steps of:

placing a threaded cap having a cap flange that surrounds an entire circumference of the cap on a threaded vessel having a corresponding vessel flange; and

securing the threaded cap to the threaded vessel a first time by rotating the threaded cap in one direction approximately 180 degrees or less.

47. (Original) The method of claim 46, wherein securing the threaded cap comprises rotating the threaded cap in one direction approximately 90 degrees.